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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,567	03/29/2007	Chikara Ohki	2006_0503A	9262

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EXAMINER

VELASQUEZ, VANESSA T

ART UNIT	PAPER NUMBER
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1793

NOTIFICATION DATE	DELIVERY MODE
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07/27/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/574,567	Applicant(s) OHKI ET AL.	
	Examiner Vanessa Velasquez	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4 and 5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1,2,4 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

Claim 3 remains canceled. Currently, claims 1, 2, 4, and 5 are pending and presented for examination.

Status of Previous Rejections Under 35 USC § 112

The previous rejection of claim 5 under the first paragraph of 35 U.S.C. 112 is maintained. Applicant cites a portion of page 27 of the present specification as providing support because it states that the nitrogen content in the steel is increased for a comparative example. In response, the citation refers to the nitrogen content in the steel, not varying the concentration of ammonia in order to manipulate nitrogen content in the steel. For at least this reason, the rejection stands.

Specification

1. The amendment filed 5/18/2010 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "Based on these examples, it can be seen that the concentration of NH_3 before decomposition in the furnace affects the content of nitrogen in the steel."

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohki (US 2003/0123769 A1) in view of Okita et al. (US 5,672,014), and further in view of Higgins ("The Surface Hardening of Steels," Ch. 19, *Engineering Metallurgy, Part I: Applied Physical Metallurgy*). The claims remain rejected for substantially the same reasons presented in the Office action dated 12/18/2009.

Response to Arguments

4. Applicant's arguments filed 5/18/2010 have been fully considered but they are not persuasive.

First, Applicant argues that the heat treatment pattern in Ohki, even if identical to that of the present invention, would not necessarily result in the claimed nitrogen content. In response, the Examiner did not assert inherency based solely on the heat treatment pattern of Ohki. See page 7 of the Office action dated 12/18/2009.

Second, Applicant argues that the Examiner has failed to show that one of ordinary skill in the art would manipulate factors (e.g., ammonia concentration, temperature) important to the carbonitriding process to arrive at the present invention. In response, the Examiner respectfully disagrees. Higgins, cited by the Examiner in the rejection, teaches that "[t]he relative proportions of carbon and nitrogen dissolved may

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be controlled by varying both the concentration of ammonia and the temperature" (p. 476, section 19.46). Higgins is an engineering metallurgy textbook intended for educating undergraduate students studying metallurgy ("Preface to the first edition"; page viii of "Preface to the sixth edition). Therefore, the teachings in Higgins would be general knowledge to one of ordinary skill in the metallurgical arts. The motivation to carbonitride such that the nitrogen concentration in the surface is 0.05-0.9% is disclosed by Okita et al., another reference cited by the Examiner. Since the claimed nitrogen concentration is desired in the prior art (Okita et al.) and the variables to manipulate to achieve that desired nitrogen concentration are known, it would have been obvious to one of ordinary skill in the have altered the variables, as known in the art, to form a steel with that desired concentration.

Third, Applicant argues that the Examiner is "clearly biased," utilized hindsight reasoning, and made mere conclusory statements in making the rejection. In response to Applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In the present instance, all limitations and motivations are unambiguously taught in the prior art of Okhi, Okita et al., and

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Higgins. Thus, it is not believed that improper hindsight guided the Examiner in writing the rejection.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanessa Velasquez whose telephone number is 571-270-3587. The examiner can normally be reached on Monday-Friday 9:00 AM-6:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Wyszomierski/
Primary Examiner
Art Unit 1793

/Vanessa Velasquez/
Examiner, Art Unit 1793